

ABSTRACT OF THE DISCLOSURE

A low cost power supply system is implemented without adding a filter circuit by configuring an
5 overvoltage protection circuit without a thyristor. A sub-loop control circuit is added to an AC/DC converter. The sub-loop control circuit is configured such that a photoreceptor side transistor of a photocoupler 26 has the collector terminal connected to the gate terminal
10 of a MOS-FET 2 via a resistor 38, and the emitter terminal connected to the base terminal of a transistor 3, and that the phototransmitter side of the photocoupler 26 is connected to an operational amplifier 39, resistors 40-43, and a Zener diode 44. In addition, in a DC-DC
15 converter, a Zener diode 45 is connected across the input of the converter and the non-inverting input terminal of a comparator 33 with the anode of the Zener diode being connected to the non-inverting input terminal.